

Application No.: 09/806,304
Examiner: Ernesto Garcia
Art Unit: 3679

AMENDMENT

Please amend the pending application in accordance with the following particulars.

In the Claims

The claims are amended as shown on the following pages under the heading LIST OF CURRENT CLAIMS. The list shows the status of all claims presently in the application and is intended to supersede all prior versions of the claims in the application. Any cancellation of claims is made without prejudice or disclaimer.

LIST OF CURRENT CLAIMS

Claims 1 – 65 (Canceled).

Claim 66 (New). A corner joint comprising two frame side members having attachment channels and mitered end portions, and at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the corner joint is provided with locking means comprising of upset material parts each in the shape of a lip projection made by slantingly pressing in the upset material parts of the side members which cooperate with notches defined on the corner piece;

wherein each insert part includes at least one of said notches defined on the corner piece, said at least one notch comprising:

a triangular shape defined by a first side against which the lip projection is positioned is longer than a second side over which a free end of the lip projection is pressed in; or

a shape of a predominantly right-angle triangle, wherein the relation between said first side against which the lip projection is situated and said second side over which the free end of the lip projection is pressed in is variable by the compression characteristics of the material of the side members;

wherein the second side extends perpendicular or substantially perpendicular to the longitudinal direction of the lip projection; and

wherein said second side of the at least one notch over which the free end of the lip projection is pressed in has a buckled shape.

Claim 67 (New). The corner joint according to claim 66, wherein each of said insert parts includes an end portion geometrically configured in the shape of a triangle having an apex directed along a longitudinal axis of the respective attachment channel, each insert part defining a second leg arranged to be urged against an inner wall of the respective attachment channel, a first leg connecting at a first end with a first end of the second leg to form the apex and extending at an oblique angle relative to the second leg in a direction generally proximal to the corner portion, and a third leg extending obliquely relative to the second leg in a direction generally proximal to the corner portion and connecting to the second leg.

Claim 68 (New). The corner joint according to claim 67, wherein a panel is retained by the frame side members by a plurality of wedges.

Claim 69 (New). The corner joint according to claim 68, wherein the first leg is directed such that an intersection between an edge of the panel and a theoretical line formed by the prolongation of the first end is situated a distance near 10 cm from a corner of the panel.

Claim 70 (New). The corner joint according to claim 67, wherein each of the insert parts includes a resilient member comprising said second leg and a connecting leg situated in an extension of said second leg for connecting the end portions with the connecting ends of the insert parts; the end portion and the resilient member of each of said insert parts connected to one another at an angle so that the resilient members provide for a reactive tensile force to the compression force which occurs in the side members ends and which have been created by pushing off both side members on the notch of the corner piece.

Claim 71 (New). The corner joint according to claim 70, wherein the resilient members are arranged to be positioned generally along the inner wall of the respective attachment channel.

Claim 72 (New). The corner joint according to claim 70, wherein a mutual interlocking between the corner piece and the side members is carried out by the locking means; and wherein a clearance is defined between the outer wall of the respective attachment channel and insert parts when the corner piece is inserted into the respective attachment channel, the clearance generally extending from the locking means to at least the connecting end of the insert parts.

Claim 73 (New). The corner joint according to claim 70, wherein the corner piece is provided with positioning elements arranged to guide the insert parts into the attachment channels when positioned therein; and,

wherein the positioning elements include at least one of the following elements;

elastic press-on elements provided to push the inner sides of the insert parts against an inner wall of the respective attachment channel;

elastically bendable flaps provided on the insert parts at a predetermined distance from the connecting ends thereof and arranged to cooperate with the outer wall of the respective attachment channel;

support and guiding elements provided on the corner piece in the shape of a little leg having elastically bendable flaps arranged to cooperate with the outer wall of the respective attachment channel.

Claim 74 (New). The corner joint according to claim 70, wherein the corner piece includes a clearance generally defined at an inside corner where the insert parts connect and having a hook-shaped profile.

Claim 75 (New). The corner joint according to claim 70, wherein the insert parts connect to form a unitary corner piece.

Claim 76 (New). A corner joint comprising two frame side members having attachment channels and mitered end portions, and at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members,

the attachment channels being confined by an inner wall and an outer wall,
wherein a mutual interlocking between the corner piece and the side members is carried out by locking means, which are formed of lips defined by a pressed-in material part of the outer wall,

wherein the locking means generate a pre-stress in the form of pressure on both side members and tension in the corner piece, the locking means comprising material parts which are upset by compressing the material;

wherein the upsetting has a useful working force on the total mitre; and

wherein a compression force has been created in the side members ends by pushing off both side members on the locking means;

the corner piece being equipped with inclined parts defining a pressure zone between the locking means and a place on the inner wall which is situated deeper in the attachment channels, so that there can be a pressure increase between said place and the locking means;

the insert parts being equipped with resilient members which are connected to one another at an angle; and

the inclined parts being connected to the accompanying free end of the resilient member;

wherein the inclined parts form means to create a tensile force in the resilient members, since the pressure in the inclined parts results in a tension in the resilient members;

the tensile forces in the resilient members resulting in pressure forces in the outer and inner walls, thus contributing to the rigidity and pre-stress of the obtained mitre as a whole.

Claim 77 (New). The corner joint according to claim 76, wherein a free space is provided on the outside corner of the corner piece.

Claim 78 (New). The corner joint according to claim 76, wherein the corner joint is provided with locking means comprising of upset material parts each in the shape of a lip projection made by slantingly pressing in the upset material parts of the side members which cooperate with notches defined on the corner piece;

wherein each insert part includes at least one of said notches defined on the corner piece, said at least one notch comprising:

a triangular shape defined by a first side against which the lip projection is positioned is longer than a second side over which a free end of the lip projection is pressed in; or

a shape of a predominantly right-angle triangle, wherein the relation between said first side against which the lip projection is situated and said second side over which the free end of the lip projection is pressed in is variable by the compression characteristics of the material of the side members; and

wherein the second side extends perpendicular or substantially perpendicular to the longitudinal direction of the lip projection.

Claim 79 (New). The corner joint according to claim 78, wherein said second side of the at least one notch over which the free end of the lip projection is pressed in has a buckled shape.

Claim 80 (New). The corner joint according to claim 76, wherein the locking means are formed by pressed-in lips, wherein use is made of stop-parts which are situated behind the lips, the stop parts extending in the prolongation of the press-on direction and wherein near a stop part the insert parts of the corner piece are equipped with a recess so that the stop parts are detached from the rest of the structure over practically their entire girth.

Claim 81 (New). The corner joint according to claim 80, wherein the stop parts are carried out in relief in the shape of a serration.

Claim 82 (New). The corner joint according to claim 76, wherein each of said insert parts includes an end portion geometrically configured in the shape of a triangle having an apex directed along a longitudinal axis of the respective attachment channel, each insert part defining a second leg arranged to be urged against an inner wall of the respective attachment channel, a first leg connecting at a first end with a first end of the second leg to form the apex and extending at an oblique angle relative to the second leg in a direction generally proximal to the corner portion, and a third

leg extending obliquely relative to the second leg in a direction generally proximal to the corner portion and connecting to the second leg.

Claim 83 (New). The corner joint according to claim 82, wherein the inclined parts are a fragment of the first leg.

Claim 84 (New). The corner joint according to claim 83, wherein the corner joint is part of a frame in which a panel is provided by wedging it up by means of wedges, wherein the middle of the wedges is situated in the prolongation of the inclined parts.